

Abstract

A semiconductor device structure, includes a PMOS device 200 and an NMOS device 300 disposed on a substrate 1,2, the PMOS device including a compressive layer 6 stressing an active region of the PMOS device, the NMOS device including a tensile layer 9 stressing an active region of the NMOS device, wherein the compressive layer includes a first dielectric material, the tensile layer includes a second dielectric material, and the PMOS and NMOS devices are FinFET devices 200, 300.

(Fig. 17)